	CS 465	
	Homework	
	Da) BED Instruction uses: Imem, Add, Reg, ALU, Signiextend, shirts 400+100+200+150+50+30=930ps	<u>.</u>
	b) ADD uses: I mem, Add, Reg, ALU, D-Mem	
	400 + 100 + 200 + 150 + 500 = 1350 ps	
<u></u>	c) LW uses : I mem, Add, Reg, ALV, signext, D-Mem	7
	400+100+200+150+500+50= 1400ps	-
	d) Because Iw has the longest latency the clock cycle supporting the three instructions is: 1400 ps	-p
	e) Because D-Mem is the most expensive this should be the data path component to have a reduced Latency	
·		

All male legen well (compressed plane)	2) True Dependency:	
		Men
	(\$8.II, I2)	largeto.
	(\$8 I3 I4)	Provide
agagagagagaaa, aay ahnii iyo ciilaa cii iaagan isoo oo o	(\$8, I3, I5) (\$8, I3, I5)	hpřísníc
		spinosca
	b) 11 add \$8, \$12, \$10	Electric .
	NOD	N-Cigal
	Nop.	pintoni
	Sw = 19, p(18)	totox
	lw\$8,4(\$9)	idetimigs
	NOP	Elitera
	NOD	Ministra
	and \$12,\$12,\$8	Hearten
	2) 2 SW \$8, D(\$9)	
a production of the second	the state of the s	
	c) add \$1,\$12,\$10	
P REPRESENTATION	LW \$8,4(89)	
	NOP	
	Sw \$9,0(\$1)/1	
	and \$12,\$12,\$8 10 110:11	
	Sw \$8,0(\$9)	
	ADD IF ID EX MEM WB	
on the second supplies and the	IN IF ID EX MEM WB	
and the second of the second of the	vop a a a a	
	W IF ID EX MEM WB	_
	and IF ID EX MEM WB	
	SW IF ID EX MI	
	W.	
Minteres and a second		dien.

(Dd)	
add IF ID EX MEM WB SW IF ID EX MEM WB NDP	Contract of the Contract of th
(3 a) Alamays taken accuracy	
TTTNTTNT - 4 - 2 accorded	
For this sequence is the prediction is always taken gives 4 out of 6 correct hence the 2/3 accuracy 66%	
always-not-taten.	
NTNTNTNTNT = 2 = 1	
b) Two bit predictor from Fig. 4.63 yields	
7 T T NT T - 2 > NT NT T T T - 5	
only two of five predictions were correct for this branches.	

c) We find out by repeating the TTTNTT NT TTTNT The first two results can be ignored since we want to Know according on an infinite number of branches Hence in general we get 4 out of 6 predictions correct since TTTNTTNT the accuracy 1/3